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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER				
TANK, ANDREW L				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/715,041

Applicant(s)

CHENG ET AL.

Examiner

Andrew Tank

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-5, 8-13, 15-17, 20, 21, 23, 24 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 8-13, 15-17, 20-21, 23-24, and 26-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The following action is in response to the amendment filed March 26, 2007. Claims 1, 10, 13, and 24 have been directly amended. Claims 28-30 have been newly added. Claims 22 and 25 have been canceled. Claims 1, 3-5, 8-13, 15-17, 20-21, 23-24, and 26-30 are pending and have been considered below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 3-5, 8-13, 15-17, 20-21, 23-24, and 26-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto et al., "Tele-Handshake through the Internet", IEEE Workshop on Robot and Human Communication, copyright 1996 IEEE, pages 90-95, previously presented as "Hashimoto", in view of Cohen et al. (US 7,036,094), previously presented as "Cohen".

Claims 1, 10, and 13: Hashimoto discloses a method, system, and computer-readable medium of communicating physical human interactions over a communications network (page 90 col 2 lines 4-8) comprising:

detecting physical contact with a first model by a first user located at a sending system (page 90 col 2 "Tele-Handshaking System" paragraphs 1 and 2, tactile feedback, Operator A, site

A), said first model representing at least a portion of a human body (page 91 Fig. 2), wherein said first model incorporates one or more contact sensors (page 91 Fig. 2);
generating data from said sensors specifying the physical contact (page 90 “Tele-Handshaking System” paragraph 4);
determining at least one action intended by the generated data (page 90 “Tele-Handshaking System” paragraph 4);
transmitting the determined action over a communications network to a receiving system (page 91 paragraph 1); and
simulating the action by performing said action on a second user at the receiving system using a second model (page 90 “Tele-Handshaking System” paragraph 2), said second model representing at least said portion of said human body (page 91 Fig. 2), wherein said second model incorporates one or more actuators (page 91 Fig. 2).

While Hashimoto discloses that the portion of a human body is a hand and that the physical contact in question is a handshake, Hashimoto does not explicitly disclose that the portion of a human body includes at least one among a human head, face, back and entire human body; nor does Hashimoto disclose that the generated data used in determining an action to be transmitted and simulated also includes data gathered from detecting a physical movement of the first user using one or more optical sensors, wherein the physical movement includes at least one of a body movement and a change in facial expression of the first user, and that this additional data causes the second model to activate the detected physical movement. Cohen discloses a system for recognizing behaviors as a combination of gestures identified on various parts of a human body in motion (Abstract lines 1-3). The various gestures include

any type of static gestures determined via multiple cameras (col 16 lines 62-63), including body portions such as foot, limb and full body gestures (col 16 lines 65-67). The gestures are recorded and compared by a behavior program to identify what type of behavior is being presented (col 23 lines 43-47). Therefore, it would have been obvious to one having ordinary skill in the art and the teachings of Hashimoto and Cohen before them at the time the present invention was made, to further expand the physical contact transmission method of Hashimoto to include visual identification of various actions using different human body portions. One would have been motivated to do this in order to expand the hand-shake action of Hashimoto to further include other actions from other body parts, as suggested by Cohen (col 16 lines 65-67).

Claims 3 and 15: Hashimoto and Cohen disclose the physical movement transmission and replication method and computer-readable medium as in claims 1 and 13 above respectively, but do not explicitly disclose converting the data to markup language formatted data. However, Hashimoto discloses operating the method using the TCP protocol (page 91 3.1). Therefore it would have been obvious to one of ordinary skill in the art and having the teachings of Hashimoto and Cohen before them at the time the present invention was made, to implement the computer methods as modules and to convert them to a mark up language for Internet use. One would have been motivated to do this in order to use another standardized, reliable computer programming language, as suggested by Hashimoto (page 91 3.1. "we have selected to use reliable TCP protocol), thereby avoiding the cost and time involved with developing one's own programming language, as well as to provide a programming language specifically developed for use with internet based applications.

Claims 4 and 16: Hashimoto and Cohen disclose the physical movement transmission and replication mark up language method and computer-readable medium as in claims 3 and 15 above respectively, and Hashimoto further discloses identifying the action from the markup language formatted data in the receiving system (page 90 “Tele-Handshaking System” paragraph 4).

Claims 5 and 17: Hashimoto and Cohen disclose the physical movement transmission and replication mark up language method and computer-readable medium as in claims 4 and 16 above respectively, and Hashimoto further discloses wherein the markup language formatted data specifies at least one actuator movement to be implemented by the receiving system and an amount of force to be applied in the at least one actuator movement (page 90 “Tele-Handshaking System” paragraph 4).

Claims 8 and 20: Hashimoto and Cohen disclose the physical movement transmission and replication method and computer-readable medium as in claims 1 and 13 above respectively, and Hashimoto further discloses said simulating step further comprising the step of translating the action into instructions for activating at least one actuator (page 91 Fig. 1 on Operator B Site B: “Host Computer – ISA bus - DA”); and activating the at least one actuator in accordance with the instructions (page 91 Fig. 1 on Operator B Site B: “DA – Linear Motion Motors – Handshake Device”).

Claims 9, 11, 12 and 21: Hashimoto and Cohen disclose the physical movement transmission and replication method, system, and computer-readable medium as in claims 1, 10 and 13 above respectively, and Hashimoto further discloses the method further comprising:

detecting physical contact of the second model by a second user (page 90 col 2 “Tele-Handshaking System” paragraphs 1 and 2, tactile feedback, Operator B, site B), wherein said second model incorporates one or more sensors (page 91 Fig. 2);
generating data from said sensors specifying the physical contact of the second model (page 90 “Tele-Handshaking System” paragraph 4);
determining at least one action intended by the second user indicated by the generated data (page 90 “Tele-Handshaking System” paragraph 4);
transmitting the determined action over a communications network to the sending system (page 91 paragraph 1); and
simulating the action by performing said action on the first user at the sending system using the first model (page 90 “Tele-Handshaking System” paragraph 2), wherein said first model incorporates one or more actuators (page 91 Fig. 2).

Claims 23 and 26: Hashimoto and Cohen disclose the physical movement transmission and replication method and computer-readable medium as in claims 1 and 13 above respectively, and Hashimoto further discloses wherein said generated data specifies a time when a force was detected (page 95 Fig. 7 Operator force, x-axis = time in seconds), amount of said force (page 95 Fig. 7 Operator force, y-axis = force in Newtons), and a location on said human body to which said force was applied (page 95 Fig. 7 Tele-handshake test result, hand).

Claims 24 and 27: Hashimoto and Cohen disclose the physical movement transmission and replication method and computer-readable medium as in claims 1 and 13 above respectively, and Hashimoto further discloses wherein said action intended by said first user includes at least one

among a handshake, an embrace, and a pat on the back (page 90 “Tele-Handshake through the Internet”).

4. **Claims 28-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto and Cohen as applied to claims 1, 10, and 13 above, and further in view of Rovers et al., "HIM: A Framework for Haptic Instant Messaging", Conference on Human Factors in Computing Systems (CHI '04), extended abstracts on Human factors in computing systems, April 24-29, 2004, Vienna, Austria, pages 1313-1316, hereafter known as "Rovers".
5. **Claims 28-30**: Hashimoto and Cohen disclose the physical movement transmission and replication method and computer-readable medium as in claims 1, 10 and 13 above respectively, wherein human actions are interpreted as behaviors by a physical model and optical sensors and transmitted over a network to be actuated by another physical model. Hashimoto and Cohen do not explicitly disclose providing a graphical user interface, within said graphical user interface said first user can select human actions or processing tasks, wherein said human actions include at least one among “touch the face”, “touch arm”, and “embrace” and said processing tasks include at least one of “opening an audio channel” and “opening a video channel”. Rovers discloses an Instant Messaging system wherein haptic effects can be selected by a first user and conveyed via communication network to a second user (page 1313 paragraphs 1-8). Rovers discloses several haptic effects that can be selected by a user via graphical user interface (page 1314 paragraph 7, page 1315 paragraph 12) and that audio used for instant messaging (page 1313 paragraph 9). Therefore, it would have been obvious to one having ordinary skill in the art and the teachings of Hashimoto, Cohen and Rovers, to combine the GUI for selecting and

transmitting haptic actions and as taught by Rovers, with the physical movement transmission method of Hashimoto and Cohen, to yield a graphical user interface for selecting human actions and processing tasks such as opening a video or audio channel. One would have been motivated to do this in order to provide a direct instant messaging client with physical movement actuation, as suggested by Rovers (page 1315 paragraph 1).

Response to Arguments

6. Applicant's arguments filed March 26, 2008 have been fully considered but they are not persuasive.
7. In response to applicant's argument that Cohen is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Cohen pertains to recognizing human actions through the use of sensors (Abstract) and is therefore analogous.
8. Applicant argues, on page 10, that Hashimoto does not disclose anywhere that the human body part represented by the first model can be a human head, a human face, a human back, or an entire human body. Applicant argues, on page 11, that Hashimoto does not take into consideration the body movement or facial expression, but only the physical contact between the operator and the hand shake device. Both arguments are addressed by the combination of Hashimoto and Cohen presented in the rejections of claim 1, 10, and 13 above. One cannot show nonobviousness by attacking references individually where the rejections are based on

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combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. DiSalvo et al., "The Hug: An Exploration of Robotic Form for Intimate Conversation", Proceedings of the 2003 IEEE International Workshop on Robot and Human Interactive Communication, Millbrae, California, USA, Oct. 31 - Nov. 2, 2003, pages 403-408.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Tank whose telephone number is 571-270-1692. The examiner can normally be reached on Mon - Thur 0830-1700 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Bashore can be reached on 571-272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. T./
Examiner, Art Unit 2175
July 9, 2008

/Kieu D Vu/
Primary Examiner, Art Unit 2175